



## **FACTORS INFLUENCING CORPORATE CAPITAL STRUCTURE: EVIDENCE FROM SELECTED REAL ESTATE FIRMS**

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### **ABSTRACT**

*This study analyses the explanatory power of the theories of capital structure. In this paper, an attempt has been made to examine the relationship between factors such as age of firm, size of firm, asset structure (tangibility), firm risk, growth opportunity, profitability and non-debt tax shield as independent variables and capital structure (leverage of the real estate companies) as dependent variable of the selected real estate firms. The multiple regression tests used to analyze the determinants of capital structure, the result revealed that there is a positive significant relationship between the firm size and profitability and degree of leverage at 5% level of significance. While there is a negative significant relationship between non debt tax shield and leverage at 1% significance. Overall, the model is significant at 1%. Finally, the results show there is no significant relationship between the age of firms, tangibility, firm risk and growth opportunity and the degree of leverage. The estimation results are also compared with literature studies of capital structure theories like trade-off, pecking order and agency theory. The results suggest that the Trade-off and Pecking order Theories are pertinent whereas there was little evidence to support the information asymmetry Theory. Based on the comparison it is concluded that firm size, non-debt tax shield and profitability have huge contribution in the determination of financing choice in real estate companies in Ethiopia.*

### **Introduction:**

The Real estate sector plays an important role in the Ethiopian economy. The real estate comprises 9.1 percent of the GDP of Ethiopia in the fiscal year 2008/09. According to GDP

sector data, the real estate sector grew in real terms annually by an average of 14.1 percent. The real estate sector is now becoming increasingly common; In particular, prices at the high end of the Addis Ababa real estate market are almost comparable to those seen in other African countries, where average sale prices are \$1,000,000 in the main cities as compared to about \$800,000 in Addis Ababa. Nonetheless, the real estate sector will not stand without financing decisions. Obviously, when firms come to the idea of deciding how to make financing choices it is always evident that they have to make decisions. Literatures have shown that the determination of capital structure come into existence since Modigliani and Miller introduced their capital structure irrelevance prepositions in their seminal article in 1958. Since then the determination of capital structure has been one of the most controversial issues in the finance literature. As a result, several theories have been developed suggesting a number of factors that might determine a firm's capital structure decision. One of them is the Trade-off theory, which assumes that there are benefits and costs associated with the use of debt. The other main theory is the Pecking Order that hypothesizes that, the information asymmetry that insiders and outsiders have about the firm's investment opportunities and income distribution will make difference in the firm's financing choice. Another theory is the Agency Theory, which deals with the cost due to the conflict that arose between the shareholders and management. On the other hand, empirically numerous studies have been conducted to investigate the determinants of capital structure based on these theories particularly, trade off theory and pecking order theory. However, neither Trade-off theory nor the Pecking order hypotheses have found to provide robust and exclusive explanatory power. Researches on the determinants of capital structure were initially directed mainly towards firms in the developed countries.

To broaden the understanding of capital structure models, Rajan and Zingales (1995), have attempted to find out whether the capital structure choices in other countries are made based on factors that are similar to those capital structure influencing U.S firms. Here tangibility of assets, growth, size of the firm and profitability were tested to see their influences on leverage. However, researches done using the applicability of the theories of capital structure are not abundant in developing countries, though Joshua (2008), have studied the capital structure issues in developing nations. The determinants of capital structure of the real estate firms are still under-explored areas in the literature of financing decision. Therefore, the purpose of this study is to show the determinants of capital structure in real estate firms in Addis Ababa, Ethiopia.

The objective of this study is to investigate and identify the relevance of the theoretical internal (firm level) factors which are determining capital structure of real estate companies in Addis Ababa. With this regard the study also emphasis on to identify whether capital structure decisions that are made in the real estate companies in Addis Ababa, Ethiopia provide empirical support for extant theories or not.

## **Review of Empirical Literature**

A number of studies have been conducted to study about determinants of capital structure in different sectors. Many of these studies have, however, concentrated on exploring the various factors that are determining the capital structure of firms operating in different environments and verify the relevance of the various theories. Allen (1995) analyzed capital structure determinants in Real estate limited partnerships. The empirical results indicated that growth firms use less debt. Furthermore, companies with a high degree of assets suited for collateral employ more leverage. It also shows that earning volatility is not a significant determinant of capital structure.

LiufangLi (2010) has undertaken a study on the Chinese listed Real estate companies by using panel data. The regression result revealed that there is negative relationship between leverage and profitability and growth opportunity while there is positive relationship between leverage, size and tangibility. The estimation results are compared with the literature study of capital structure theories including Miler and Modigliani's, trade-off and pecking order theories. Most of the estimations from the model are consistent with the trade-off and pecking-order theories. The study argues these two theories cannot fully provide convincing explanations for the capital choices of the Chinese Real estate firms. Instead, some of the results are explained by the practical situation gained from series of interviews with Chinese developers suggesting that the institutional differences and financial constraints in the capital markets especially for Real estate firms in China are also the factors influencing firms' capital structure decisions.

Existing theoretical and empirical studies are predominantly from the developed and emerging markets of Europe and the United States of America. With scanty evidence to explain the financing patterns of the less-developed countries like Ethiopia. This study attempts to provide insight into the anomalies of capital structure choice with regard to Real estate companies in

Ethiopia. This study focused only on the determinant of capital structure. Additionally, the population of this study was limited to real estate companies that are found in Addis Ababa. The variables used in this study are age, size, tangibility, profitability, firm risk, growth opportunity and non-debt tax shield. Other variables used in similar assessments are not included.

### **Research Methodology:**

The research methodology was designed to investigate the determinants of capital structure choice among Real estate firms currently operating in the Ethiopian market by determining whether they follow any of the three theories namely the Tradeoff theory, the Pecking order theory, and Agency theory. The methodology used in this study is an empirical analysis to investigate one aspect of financing behavior from another based on the major theories prescribed in finance literature. A secondary data source is solely used in this study. The population of the study is the Real estate companies that are found in Addis Ababa. According to Addis Ababa City Administration, the numbers of real estate firms are 125. This study does not include all Real estate companies in Addis Ababa because of the impracticability and time limitation. Convenience sampling technique was used to identify and select the companies on the basis of availability of required data for at least 5 consecutive years 2009 to 2013. According to Fink and Koseoff (1998) convenience sampling is a non-probability sampling whereby one selects everyone who meets the criteria for the study. After the selection of companies that met the above criterion, random sampling was employed in order to determine the sampling units of the study which are 10 real estate firms that are registered under the Addis Ababa City Administration. The relevant data and accompanying information was obtained mainly from the audited financial statements of each company included in the sample. The data obtained directly from secondary sources was in a raw format and could not be used meaningfully to conduct this analysis. Hence, Microsoft Excel applications were used to calculate the necessary financial ratios and to refine the data required for analysis. Econometric software Eviews 6 and SPSS version 19 program was used to conduct the main regression procedure. This analysis involved both a cross-sectional approach and time-series approach to data analysis. In order to test the determinant of capital structure in real estate companies and to test whether the result obtained pertains with the existing theory. It is necessary to identify the variables to be used. In this study Leverage is identified dependent variable and age of the firm, Firm size, Tangibility,

Profitability, Firm risk class, Growth opportunities, and Non tax shield are identified as independent or explanatory variables and it was expressed as a regression model

Based on the above literature the following hypotheses are drawn:

Hypothesis 1: There is a positive relationship between leverage ratio and age.

Hypothesis 2: There is a positive relationship between leverage ratios and size.

Hypothesis 3: There is a positive relationship between leverage ratios and tangibility.

Hypothesis 4: There is a negative relationship between leverage ratios and profitability

Hypothesis 5: There is a negative relationship between leverage ratios and firm risk.

Hypothesis 6: There is a positive relationship between leverage ratios and growth.

Hypothesis 7: There is a negative relationship between leverage ratios and non-debt tax shields.

Model for testing the aforementioned hypothesis in is

$$\text{Leverage} = \beta_0 + \beta_1 \text{AG}_{it} + \beta_2 \text{SZ}_{it} + \beta_3 \text{T}_{it} + \beta_4 \text{PR}_{it} + \beta_5 \text{BR}_{it} + \beta_6 \text{GRO}_{it} + \beta_7 \text{NDTS}_{it} + \epsilon$$
 (Model 1)

Where: *leverage* as a book value is measured as the ratio of total liability to total asset (dependent variable).

*Age*: the number of years the business stayed in the market *Size*: a firm *i* in time *t* measured using the log of total asset

*Tangibility*: the collateral value of a firm's asset *i* in time *t* measured as a ratio of fixed asset to total asset

*Profitability*: a measure of profitability for a firm *i* in time *t* measuring the ratio of earnings before interest and tax (EBIT) to total asset

*Business risk*: earning volatility for a firm *i* in time *t* measured using standard deviation of operating income

*Growth*: a measure of growth opportunities (future growth) for firm  $i$  in time  $t$  measured by percentage change in total asset

*Non debt tax shield*: a measure of non-debt tax shield for firm  $i$  in time  $t$  measured as the ratio of total annual depreciation expense to the firm's total asset

$\beta_1$ - $\beta_7$  represents the regression coefficient associated with each of the independent variables  
 $\beta_0$  is a constant  $\epsilon$ -error term

Based on the methodology outlined and hypothesis stated with a testing model (Model-1) the analysis of the variables like age, size, tangibility, firm risk, growth opportunity, profitability and non-debt tax shield on the debt financing pattern of Real estate companies is made for five years period starting from 2009 to 2013. To make meaningful analysis and to simplify large amount of data in a sensible way first descriptive statistics were calculated. Table-1 shows the presentation of variables in terms of their descriptive statistics such as central tendency and dispersion measures are obtained by using SPSS. The data in Table-1 shows the maximum, minimum, mean and standard deviation of both the dependent and the independent variables from 10 Real estate companies under the observation time (2009-2013). The mean of leverage of the sample is 0.39. The minimum and the maximum values are 0.0075 and 0.9933 respectively.

Table-1 Shows the maximum and the minimum ages of the companies. The means and standard deviations are also presented alongside size and tangibility. Firm risk, Growth opportunity Profitability and non-debt tax shield are also shown in with their maximum, minimum, mean and standard deviation values. Among the variables the minimums of profitability and growth opportunity have negative values. This is because the negative operating incomes of the sample companies are included.

Table-1: Summary of Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. D
Leverage	50	.0075	.9933	.391677	.2892752
Age of the firm	50	2.0000	9.0000	5.000000	1.8070158
Size	50	6.4900	8.9409	7.959711	.5661844
Tangibility	50	.0013	.7794	.355825	.2140876
Profitability	50	-.1291	3.8043	.333137	.8706756
Firm risk	50	900196.8	21161921.	8016265.380	7404012.4122265
Growth opportunity	50	-.1171	.2412	.017512	.0496673
Non debt tax shield	50	.0006	.2962	.064866	.1043438
Valid N (list wise)	50				

Source: SPSS output from financial statements of sample companies, 2009-2013.

### Model Evaluation

Regression model evaluation involves testing for significance to establish if the relationship between the dependent and the explanatory variables is linear. Data evaluation involves testing for Significance, Robustness and Heteroskedasticity. For each test, R2 and F-statistic are obtained from various regressions using 10 firms in a 5 year observation

**Test for Significance:** The test for significance establishes if each individual explanatory variable has some correlation with the dependent variable by examining the R-squared and F-Statistic values obtained from regression between leverage with the explanatory variables as defined in Equation-1. The regression results of leverage and the explanatory variables for different examination periods are presented in table-6

Table-2: R2 and F-statistic for Test of Significance

Adjusted R <sup>2</sup>	0.589439
F –statistic	11.04984
Probability (F -statistic )	0.000000

Source: Eviews out put

As can be seen from Table-2 the F-statistic is highly statistically significant. This indicates that the null hypothesis can be rejected and the alternative hypothesis that there is a linear relationship between leverage and the explanatory variables can be accepted.

**Test for robustness:** Table-3 shows robustness of the regression results. To address this issue the Ramsey RESET test was employed in which the F- statistic is found to be insignificant and the null hypothesis of the model is rejected.

Table-3; Ramsey RESET Test

F-statistic	0.220065 prob F(1,41)	0.6415
Log like hood ratio	0.267654 prob chi-square(1)	0.6049

**Test for Heteroskedasticity:** The test for Heteroskedasticity established the difference in the variances of the random variables. The White’s General Test White (1980) was employed to test for Heteroskedasticity of the explanatory variables. Residuals from the first estimate of Equation-1 were regressed on all the explanatory variables. The result of the test shows that there is no evidence of Heteroskedasticity. According to Brooks (2008), if the F –statistic is greater than 0.05 Or 5% there is no evidence for Heteroskedasticity. In this study, the result of the white test is found to be greater than 5%

Table-4 Heteroskedasticity Test: White

F-statistic	2.625723	Prob. F(35,14)	0.0523
Obs*R-squared	43.39001	Prob. Chi-Square(35)	0.1561
Scaled explained SS	26.00587	Prob. Chi-Square(35)	0.8648

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Sample: 1 50

Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.82026	10.57245	1.023440	0.3235
AGE	0.254550	0.318565	0.799050	0.4376
AGE^2	-0.004154	0.003895	-1.066341	0.3043
AGE*SIZE	-0.024222	0.047765	-0.507112	0.6200
AGE*TANGA	-0.088481	0.054237	-1.631374	0.1251
AGE*PROF	-0.023785	0.045202	-0.526204	0.6070
AGE*GROWTH	-0.492675	0.405020	-1.216422	0.2439
AGE*RISK	1.50E-09	3.30E-09	0.455680	0.6556
AGE*NDTSH	0.186847	0.094674	1.973586	0.0685
SIZE	-3.431989	2.842119	-1.207546	0.2472
SIZE^2	0.259590	0.191632	1.354629	0.1970
SIZE*TANGA	-0.630632	0.363168	-1.736476	0.1044
SIZE*PROF	0.108386	0.146265	0.741027	0.4709
SIZE*GROWTH	-4.900239	2.940221	-1.666623	0.1178
SIZE*RISK	-3.48E-08	2.34E-08	-1.484213	0.1599
SIZE*NDTSH	-0.483229	2.311991	-0.209010	0.8375
TANGA	5.414091	2.816206	1.922477	0.0751
TANGA^2	-0.306446	0.528136	-0.580242	0.5710
TANGA*PROF	-0.538449	0.389954	-1.380802	0.1890
TANGA*GRO	-7.575600	6.385797	-1.186320	0.2552
WTH				
TANGA*RISK	3.21E-08	2.75E-08	1.168307	0.2622
TANGA*NDTS	1.415482	1.182945	1.196575	0.2513
H				
PROF	-0.444414	1.404608	-0.316397	0.7564
PROF^2	-0.020012	0.058136	-0.344227	0.7358
PROF*GROWT	-1.064285	1.903244	-0.559195	0.5849
H				
PROF*RISK	-3.19E-08	3.13E-08	-1.019361	0.3253
PROF*NDTSH	0.472490	0.632667	0.746823	0.4675
GROWTH	40.99419	23.44579	1.748467	0.1023
GROWTH^2	-8.618305	6.607683	-1.304286	0.2132
GROWTH*RIS	3.18E-07	2.33E-07	1.367378	0.1931
K				
GROWTH*NDT	12.83414	9.869669	1.300361	0.2145
SH				
RISK	2.56E-07	1.62E-07	1.579865	0.1365
RISK^2	2.33E-16	1.66E-15	0.140080	0.8906
RISK*NDTSH	-1.84E-08	1.22E-07	-0.150860	0.8822
NDTSH	2.870702	17.54791	0.163592	0.8724
NDTSH^2	-3.594128	4.060964	-0.885043	0.3911

R-squared 0.867800

Adjusted R-squared 0.537301

Mean dependent var 0.028859

S.D. dependent var 0.037996

S.E. of regression	0.025846	Akaike info criterion	-4.306292
Sum squared resid	0.009352	Schwarz criterion	-2.929635
Log likelihood	143.6573	Hannan-Quinn criter.	-3.782053
F-statistic	2.625723	Durbin-Watson stat	2.674445
Prob (F-statistic)			0.0523

### Multicollinearity test

Another important factor that would affect the regression output is multicollinearity. It is the degree of inter-correlations among the variables. This study used two diagnostic techniques to investigate for the presence of multicollinearity. First, an inspection of the coefficients' table collinearity statistics was done. During this process, large values of standard errors among the coefficients were detected. Large standard errors reduce the precision with which the regression coefficient associated with a particular variable can be estimated, a term otherwise referred to as the variance inflation factor (VIF) (Glantz and Slinker, 2001). Tolerance values or the reciprocal of VIF are also used to guard against very serious multicollinearity (Glantz and Slinker, 2001). These values range between 0 and 1 and multicollinearity is indicated if the tolerance value is 0.01 or less. Conversely, VIF values exceeding 10 or R2 values of 0.9 show signs of serious multicollinearity. Values of VIF exceeding 4 or R2 values of 0.75 also warrant investigation (Glantz and Slinker, 2001).

Table-5 below shows the values of both VIF and tolerance. It can be observed that the values of all the independent variables were in excess of 0.01 in tolerance or less than 10 for VIF indicating that they were within acceptable bounds and suggesting that multicollinearity was not present among the independent variables.

Table-5: Collinearity statistics

Correlations			Collinearity Statistics	
Zero-order	Partial	Part	Tolerance	VIF
-.069	.242	.148	.783	1.278
.484	.442	.292	.475	2.105
-.258	-.009	-.005	.629	1.589
.325	.316	.197	.705	1.419
.575	.067	.040	.420	2.383
.186	.136	.081	.790	1.265
-.610	-.584	-.427	.647	1.546

Source: SPSS output from financial statements of sample companies, 2009-13

## Regression result

This section presents the empirical findings by discussing the estimated coefficients of the independent variables and the explanatory variables obtained by regressing using Panel Data.

### Explaining Power of R2

The Adjusted R2 and F-statistic is obtained from regression between debt ratio and the explanatory variables. In this section the results of the regression models are discussed. The R - squared and adjusted R-squared values for the models are also presented. The R-squared value measures how well the regression model approximates the actual variations in the dependent variable (Brooks, 2008). Table-6 shows the regression coefficients. The regression model explains approximately 58 % of the total variations in leverage which is represented by the adjusted R2. This means that about 58% of the variation in leverage in the real estate's is actually explained by the size of the firm, age of the firm, profitability of the firm, tangibility, growth, risk of the firms and non-debt tax shield. Thus, 42 % is left unexplained.

Table-6 Summary of regression results:

Variables	Coefficient	Standard Error	t-Statistics	Probability
C	-1.423259	0.529306	-2.688918	0.0102
AGE	0.026730	0.016564	1.613678	0.1141
SIZE	0.216762	0.067859	3.194274	0.0027
TANGA	-0.008950	0.155934	-0.057398	0.9545
PROF	0.078137	0.036224	2.157050	0.0368
GROWTH	0.531544	0.599672	0.886392	0.3805
RISK	2.41E-09	5.52E-09	0.436267	0.6649
NDTSH	-1.472764	0.315515	-4.667814	0.0000
R-squared	0.648091	Durbin-Watson stat		1.391430
Adjusted R2	0.589439	F-statistic		11.04984
		Prob (F-statistic)		0.000000

Source: Eviews regression output for the model:

Table:7 Regression result for tangibility

Variables	Coefficient	Standard Error	t-Statistics	Probability
C	0.515792	0.078035	6.609722	0.0000
TANGA	-0.348809	0.188419	-1.851247	0.0703
R-squared		0.066640		
Adjusted R-squared		0.047195		

Source: Eviews regression output

Table-6 shows that the variable tangibility is found to be statistically insignificant in the pooled regression. As a result single regression was conducted to check the explanatory power of tangibility over leverage (Table-7).

### **Discussion of Regression Results**

All the estimated parameters except profitability have expected signs; and except tangibility growth, age and firm risk the other variables are significant. For instance, size and profitability are statistically significant on a 5% significance level and non- debt tax shield is also statistically significant at 1 % significance level.

**Age:** Age is found statistically insignificant with a positive sign. This finding is inconsistent with the prediction of this study and the study of Petersen and Rajan (1994) as well. They found that leverage decreases with age of the firm, although they cite agency issues as a potential explanation. Age of the firm may also proxy for lower information asymmetries.

As firms grow older more information regarding their future viability becomes available. Lower information asymmetries imply higher leverage. Bondholders would be more likely to lend to firms they know more about than lending to firms they know less. This is also the case in the Ethiopian real estate context as one reason might be the absence of capital market hindering the companies not to work for reputation and take more debt.

**Size:** The variable size is found statistically significant as a determinant of capital structure of real estate companies in Ethiopia (H2). The sign of the coefficient is as expected .Table 4 reports that the coefficient on size is positive and statistically significant at the 1% significance level. This means that if the size of a firm increased the debt ratio also increased.

The effect of firm size on debt is economically significant for 1 unit increase in firm size as it is measured by the log of total asset and the debt ratio of a firm will increase by 0.217 units other things being equal. This study is consistent with the previous studies and supports the hypothesis that there is positive relationship between debt and size. Wald (1999) suggests that larger firms are more diversified and have lower variance of earnings, making them able to tolerate high debt ratios. This reflects that smaller firms have a lack of success in debt so that the relationship between leverage and size has found to be positive.

**Tangibility:** Another variable found to be statistically significant is tangibility which is a determinant of capital structure in the real estate's (H3). Tangibility is found statistically

insignificant which is inconsistent with the expectation. According to trade off and pecking order perspective firms which have tangible assets serve as good collateral to support debt thus increasing tangibility which will result in high debt. However, the findings of this study were in contrast to the Tradeoff Theory. The variable tangibility is found statistically insignificant in multiple regressions. However, when it is regressed separately in order to test the individual effect on tangibility in separation with the other variable it is statistically significant at 10% significance level. Table 4.7 indicates that there is a negative relationship with leverage. This means that if tangibility ratio increased, as measured by the ratio of fixed asset over total asset the debt ratio will decrease. This finding is controversial with the prediction which is tangibility and debt has positive relationship as it is shown in the table below: 1 unit increase in tangibility will result in a -0.35 decrease in debt ratio. However, according to Harris and Raviv (1991) the information asymmetries will be large for companies with few tangible assets. A consequence of this is that companies who have fewer tangible assets are forced to be greatly leveraged. As a result in this situation tangibility and leverage has negative relationship. Therefore, in the finding of this study this might be the case in Ethiopia real estate companies as well.

**Profitability:** Another variable found to be determinant in capital structure of firms is Profitability (H4). Profitability is found to be statistically significant at 5% though the sign is not as expected. This means that increase in profitability will result in increase in debt ratio which is measured by the ratio of operating income to total asset. This study result is inconsistent with Pecking order theory which indicates a negative relationship between profitability and debt. According to this theory; profitable firms prefer internal funds rather than external due to asymmetric information or transaction costs. As a result, according to the trade-off theory, more profitable firms should carry more debt in order to benefit from the tax advantage obtained from debt so that they can protect the profit from taxation.

**Firm risk:** Other variables have found to be statistically significant in the determination of firms capital structure (H5). Firm risk is statistically insignificant in the determination of financial choice in Ethiopia in contrast to the study undertaken by Westgaard and et al (2008), Liufang Li (2010) who has found there is a negative relationship between firm risk and debt. Therefore, the finding of this study regarding a firm's risk that is viewed as statistically insignificant in

determining real estate companies' mix of debt and equity is consistent with Allen's (1995) findings.

**Growth Opportunity:** Growth opportunity is found to be a statistically significant variable as a determinant of capital structure(H6). In this study growth has found to be statistically insignificant, though it has a positive sign. Pecking order theory posits that high growth firms will face large information asymmetries and will seek to issue securities which minimize such asymmetries. However, in Ethiopia, particularly the real estate companies fail to determine a firm's capital structure.

**Non debt tax shield:** Another variable found to be statistically significant in determination of real estate capital structure in Ethiopia is Non debt tax shield (H7). Non debt tax shield has a negative relation with the debt ratio at 1% significance level. This means that if the non-debt tax shield ratio of a firm increased the debt ratio also increased. The effect of non-debt tax shield is economically highly significant in which for 1 unit increase in non-debt tax shield as measured by the ratio of total depreciation to total asset ,the firm debt decreased by approximately -1.472 units, other things being equal. This result is consistent with the previous studies. Again this finding is consistent with static trade-off theory of capital structure (also referred to as the tax based theory) which states that optimal capital firms increase debt in order to benefit from tax advantage of debt when the marginal tax rate increased .The result of the study is in line with the expectation. Finally, the multiple regression used and indicate there is a significant relationship between overall variables of determines of capital structure .As it is shown on Table 5.5 the F statistics is 0.00 which shows the significance all independent variable in explaining the dependent variable

## Conclusions

The findings of this study contribute towards a better understanding of financing behavior in Real estate companies in Ethiopia. The profitability level of the construction companies affect their leverageratio negatively, which supports the pecking order theory and thehypothesis formulated for the study. Thus, from the result it can beconcluded that highly profitable construction companies are more likelyrelied on internally generated funds and equity capital than debt capitalas the source of financing.

The value of Adjusted R<sup>2</sup> of the regression suggests that the dependent variable is well explained by the explanatory variables. Hypothesis based on comparing the relationships between leverage and seven explanatory variables that represent age, size, profitability, growth, tangibility, firm risk and non-debt tax shield were developed to test which variable is statistically significant in determining the capital structure of real estates in Ethiopia. Size, profitability, tangibility and non-debt tax shield are found to be significant while the remaining variables are found to be statistically insignificant. The results also suggest that both the trade-off and pecking order theories are pertinent whereas there was little evidence to support the information asymmetry theory.

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